EXHIBIT 2 TO ANSWER AND COUNTERCLAIM TO AMENDED COMPLAINT

Fisher Broyles

Russell Manning

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July 21, 2022

VIA Email only

Trent H. Baker Baker IP PLLC 124 South Main Street #3147 Cedar City, UT 84720

Re: Canadian Patent No 3,001,150

Eteros Technologies

Dear Mr. Baker,

Our firm represents Eteros Technologies, owner of the Mobius Trimmer and Triminator (formerly Mosman Machinery Company). We are in receipt of your patent notification letter dated June 22, 2022.

We have reviewed Canadian Patent 3,001,150 (the '150 Patent), which was filed as a national entry of PCT/US2017/041462, which claimed priority to U.S. Patent Application No. 15/261,894 filed on September 10, 2016. We have some concerns regarding the validity of the '150 patent. Based on our initial review, it appears the subject matter of all of the claims of the '150 Patent was fully disclosed prior to the September 10, 2016, priority date. Specifically, we believe the Trimpro Bucker produced by 9354-7453 Quebec Inc. of 158 ch. du Ruisseau-des-Noyers, Saint-Jean-sur-Richelieu, Quebec Canada, J2Y1E7 was publicly displayed and on sale prior to the priority date of the '150 Patent. The current version of the Trimpro Bucker can be found at the following link:

https://trimpro.com/product-selector/trimpro/bucker/

The Trimpro Bucker was subject of a U.S. provisional application 62/365,438 filed on July 22, 2016. A copy of the provisional application is attached as Exhibit A. As shown in Figure 3 of the provisional patent, the Trimpro name is displayed above the multiple orifice plate. A clearer copy can be viewed at:

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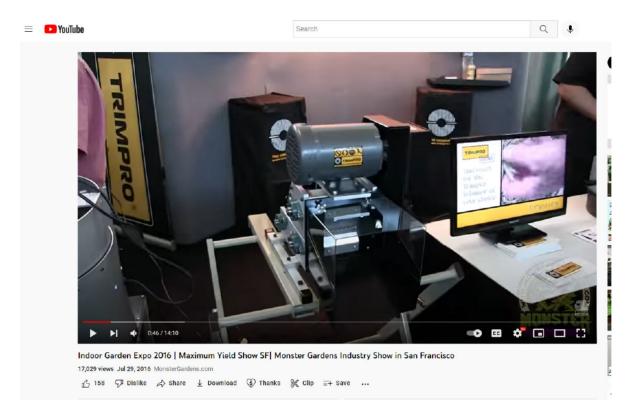
July 21, 2022 | Page 2 of 4

https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2018014135

The provisional application was filed one day before the Grow Pro Maximum Yield Indoor Gardening Expo held in San Francisco, California on July 23-24, 2016. The Trimpro Bucker was publicly displayed at the Grow Pro Expo. A YouTube video of the Grow Pro Expo was posted on July 29, 2016:

https://www.youtube.com/watch?v=bt3e 37zf5g

This video shows the Trimpro Bucker two separate times, once at 46 seconds and again minute 2:16. The following is a screen shot of the video at 46 seconds:



The following is a screen shot of the video at 2:16:

Page 4

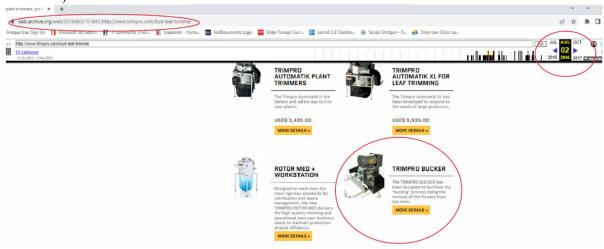
Trent H. Baker

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The expo was also attended by representatives of Triminator, who viewed the Trimpro Bucker and can attest to the same.

The Trimpro Bucker was also offered for sale at least as early as August 2, 2016. This shown in the following screenshot of www.trimpro.com by web.archive.org (i.e., the Way Back Machine):



This particular page can be found by going to https://archive.org/web/, typing trimpro.com into the search field, selecting 2016 and then selecting the August 2 image. On the resulting page, select "see all products" and scroll to the bottom. Copies of these three screen shots are attached as Exhibit B. Please note that Canada, like the United States, recognizes webpage images

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produced through the Way Back Machine as reliable and accurate. See, e.g., *ITV Technologies Inc. v. WIC Television Ltd.*, 2003 FC 1056 at para 14 and *Candrug Health Solutions Inc. v. Thorkelson*, 2007 FC 411 at para 20.

Based on our analysis of the Trimpro Bucker, the provisional patent application and Trimpro Bucker instructions (Exhibit C), we have prepared a claim chart comparing the Trimpro Bucker to the claims of the '150 Patent. See Exhibit D. We believe the provisional patent application, which includes pictures of the Trimpro Bucker as displayed in San Francisco on July 23-24, 2016, provides a good description of the device. In summary, we believe the Trimpro Bucker, which was publicly disclosed nearly two months prior to the filing date of the '150 Patent, anticipates and/or obviates each and every claim of the '150 Patent.

Eteros is not interested in engaging in any protracted and expensive infringement litigation or impeachment processes. At this time, we request that you provide an explanation of how the '150 Patent is valid in view of the Trimpro Bucker. If this is explained to our satisfaction, we would be open to further discussions regarding a potential license.

We look forward to your response.

Sincerely,

Russell Manning, Partner

FisherBroyles, LLP

CC: Dana Mosman



DOCUMENT MADE AVAILABLE UNDER THE PATENT COOPERATION TREATY (PCT)

International application number: PCT/CA2017/050879

International filing date: 21 July 2017 (21.07.2017)

Document type: Certified copy of priority document

Document details: Country/Office: US

Number: **62/365,438**

Filing date: 22 July 2016 (22.07.2016)

Date of receipt at the International Bureau: 04 August 2017 (04.08.2017)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule

17.1(a),(b) or (b-*bis*)



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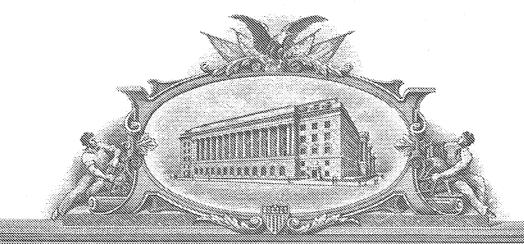
Filing date: 22 Jul 2016 (22.07.2016)

Application number: 62365438

Date of availability of document: 08 Aug 2016 (08.08.2016)

The following Offices can retrieve this document by using the access code: JP, US, SE, NZ, KR, GB, AU, ES, IB, EE, CN, MA, FI

Date of issue of this certificate: 07 Aug 2017 (07.08.2017)



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UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

August 07, 2017

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE UNDER 35 USC 111.

APPLICATION NUMBER: 62/365,438

FILING DATE: July 22, 2016

THE COUNTRY CODE AND NUMBER OF YOUR PRIORITY APPLICATION, TO BE USED FOR FILING ABROAD UNDER THE PARIS CONVENTION, IS US62/365,438



Certified by

Milalla 72. Ze

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR		ot 27 CED 4 76	Attorney	Docket Number	014245-0005	
		ELS/ CFK 1./6	Application	on Number		
Title of Inve	ntion PLANT	STEM SEPARATING	G APPARATU	JS		
bibliographic d This documen	The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.					
Secrecy Order 37 CFR 5.2:						
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Application Data Sheet 37 CFR 1.76			Attorney D	ey Docket Number 014245-0005					
Application Da	ita Sno	eet 37 CFI	ጚ 1./6	Application	n Number				
Title of Invention	PLAN ⁻	T STEM SEPA	ARATING	APPARATUS	3				
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	014245-0005
		Application Number	
Title of Invention	PLANT STEM SEPARATING	APPARATUS	

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)¹ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

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Application Number	Country	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
Additional Foreign Priority Add button.	Data may be generated wit	hin this form by selecting the	Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March
16, 2013.NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	014245-0005
		Application Number	
Title of Invention	PLANT STEM SEPARATING	APPARATUS	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant must opt-out of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is ONLY reviewed and processed with the INITIAL filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

- 1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)
- A. Priority Document Exchange (PDX) Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h) (1).
- B. Search Results from U.S. Application to EPO Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby grants the USPTO authority to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

а

cop	e applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit by of search results from the instant application without delay in a European patent application that claims priority to s instant application.
2.	Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)
	A. Applicant <u>DOES NOT</u> authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.
	B. Applicant <u>DOES NOT</u> authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.
	OTE : Once the application has published or is otherwise publicly available, the USPTO may provide access to the plication in accordance with 37 CFR 1.14.

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Application Da	ata Shoot 37 CED 1 76	Attorney Docket Number	014245-0005
Application Data Sheet 37 CFR 1.76		Application Number	
Title of Invention	PLANT STEM SEPARATING	APPARATUS	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.								
Applicant 1			Remove					
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be dentified in this section.								
 Assignee 	Legal Representative un	nder 35 U.S.C. 117	Joint Inventor					
Person to whom the inventor is obligated to assign. Person who shows sufficient proprietary interest								
If applicant is the legal representati	ve, indicate the authority to	file the patent application	n, the inventor is:					
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Name of the Deceased or Legally	ncapacitated Inventor:							
If the Applicant is an Organization	check here.							
Organization Name 4522958 (CANADA INC.							
Mailing Address Information Fo	r Applicant:							
Address 1 158, F	Ruisseau-des-Noyers							
Address 2								
City Saint-	Jean-sur-Richelieu	State/Province	QC					
Country ^j CA		Postal Code	J2Y 1E7					
Phone Number		Fax Number						
Email Address	Email Address							
Additional Applicant Data may be generated within this form by selecting the Add button. Add								

Assignee Information including Non-Applicant Assignee Information:

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Application Data Sheet 37 CFR 1.76			Attorney Doo	cket Number	014245-0	014245-0005			
			Application N	Number					
Title of Invent	tion PLAI	NT STEM	SEPARATING	APPARATUS					
Assignee 1									
application publi publication as ar	complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent pplication publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application ublication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the atent application publication.								
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Data Sheet is subsection 2 d also be signed This App	IOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c). This Application Data Sheet must be signed by a patent practitioner if one or more of the applicants is a juristic								
entity (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, all joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of all joint inventor-applicants. See 37 CFR 1.4(d) for the manner of making signatures and certifications.									
Signature //Adam Mizera/			Date (Y	YYY-MM-DI	D) 2016-0	7-22			
First Name	Adam		Last Name	Mizera		Registra	tion Numbe	r 64181	
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Application Da	nta Sheet 37 CFR 1.76	Attorney Docket Number	014245-0005		
Application Da	ita Sileet 37 Cl K 1.70	Application Number			
Title of Invention	PLANT STEM SEPARATING	ARATING APPARATUS			

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Document 20-2

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The information provided by you in this form will be subject to the following routine uses:

- 1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PLANT STEM SEPARATING APPARATUS

TECHNICAL FIELD

The present invention generally relates to a plant stem separator and more particularly concerns a plant stem separating apparatus for separating a stem from a larger upper portion of a plant.

10 BACKGROUND

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The use of plant stem separators for separating a stem from a plant is well known. They are used, for instance, for separating a flower or the like from a stem. However, the plant stem separators known in the art often damage the flowers. Furthermore, the plant stem separators may crush the upper portion of the plant if the pulling force is too great or block if the pulling force is insufficient.

There is a need for an improved plant separating apparatus for separating a stem from a larger upper portion of a plant.

SUMMARY

In accordance with one aspect, there is provided a plant stem separating apparatus for separating a stem from a larger upper portion of a plant.

In some embodiments, the plant stem separating apparatus comprises a support frame, a driving assembly, a controller, a shearing plate having a plurality of holes, a roller assembly and a transmission assembly.

The driving assembly is affixed to the support frame.

The controller is connected to the driving assembly and controls a rotational speed of the driving assembly.

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Each of the plurality of holes has varying dimensions and each one of the holes defines an inlet sized to receive and allow passage of the stem therethrough and block passage of the upper portion of the plant.

The roller assembly is affixed to the support frame and comprises a first roller and a second roller. The first roller and the second roller rotate about their respective axis at the rotational speed controlled by the controller and define a corresponding passage therebetween. The stem of the plant is conveyable through the corresponding passage.

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The transmission assembly transmits a rotational movement from the driving assembly to the roller assembly.

The first and second rollers rotate at a predetermined rotational speed and, upon a capture of the stem between the first and second rollers, the stem is conveyed through the passage between the first and second rollers with a pulling force that is sufficient to shear the upper portion of the plant from the stem when upper portion enters in contact with the inlet and is blocked thereby.

According to another aspect, there is more generally provided a plant stem separating apparatus for separating a stem from a larger upper portion of a plant, the apparatus comprising:

a shearing plate for shearing the upper portion of the plant from the stem, the shearing plate comprising at least one aperture, the aperture defining an inlet sized to receive and allow passage of the stem therethrough and block passage of the upper portion of the plant; and

a conveying system positioned behind the shearing plate for conveying any portion of the stem traversing the shearing plate further through said shearing plate,

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wherein the stem is conveyed by the conveying system with a pulling force that is sufficient to shear the upper portion of the plant from the stem upon said upper portion entering in contact with the inlet and being blocked thereby.

Other features and advantages of the invention will be better understood upon reading of preferred embodiments thereof with reference to the appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

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Figure 1 is a top perspective view of a plant stem separating apparatus according to one embodiment.

Figures 2A to 2C are rear, right side and left side views of a plant stem separating apparatus according to one embodiment.

Figure 3 is a front view of a plant stem separating apparatus according to the embodiment of Figures 2.

Figures 4A to 4D illustrate a plant stem separating process for separating a stem from a larger upper portion of a plant according to one embodiment.

DETAILED DESCRIPTION

In the following description, similar features in the drawings have been given similar reference numerals. In order to not unduly encumber the figures, some elements may not be indicated on some figures if they were already mentioned in preceding figures. It should also be understood herein that the elements of the drawings are not necessarily drawn to scale and that the emphasis is instead being placed upon clearly illustrating the elements and structures of the present embodiments.

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Moreover, it will be appreciated that positional descriptions such as "top", "bottom", "left", "right", "front" and "rear" and the like should, unless otherwise indicated, be taken in the context of the figures and should not be considered limiting.

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In accordance with embodiments, there is provided a plant stem separating apparatus for separating a stem from a larger upper portion of a plant. Some embodiments of the present invention may be useful in applications where it is desirable to remove a flower from a plant without damaging the flower. In one embodiment, the apparatus may be used in residential applications. Alternatively, the apparatus may be used for commercial and industrial applications.

Referring to Figure 1, an embodiment of a plant stem separating apparatus 100 for separating a stem from a larger upper portion of a plant is shown.

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The plant stem separating apparatus 100 includes a support frame 110 having an opened side 112. The support frame can be made of metal, plastic, polymer, combinations thereof, or any other suitable materials having the desired structural properties. It will be understood that the support frame 110 is embodied by a plurality of components assembled together defining a space that admits the insertion of a plurality of components.

In the illustrated embodiment, the support frame 110 includes a support base 114 and sidewalls 116. The sidewalls 116 are mounted onto the support base 114 and are connected one to each other with a fixing means 117. The fixing means 117 comprise two fixing shafts 118 connected to two flattened fixing rods 119. Each one of the two fixing shafts 118 is parallel with respect with the other one of the two fixing shafts 118 and the fixing means 117 define an O-shaped structure.

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In the illustrated embodiment, one sidewall is a visually transparent plastic sheet having an ejecting hole 113.

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The plant stem separating apparatus 100 further comprises a driving assembly 120 mounted to the support frame 110. The driving assembly 120 can be an electric motor, a gas engine, or any assembly which converts one form of energy into mechanical energy.

The plant stem separating apparatus 100 also comprises a transmission assembly 130 and a roller assembly 140. The transmission assembly comprises a motor gear 131, a first roller gear 132, an optional supplementary gear 133, a second roller gear 134 and a belt 135 defining a closed-loop path with a motor section and a roller assembly section. The belt 135 is engaged with the motor gear 131 in the motor section and is engaged with the first roller gear 132, the optional supplementary gear 133 and the second roller gear 134 in the roller assembly section. A rotation of the motor gear 131 drives the belt 135 along the closed-loop path and engages the first roller gear 132, the optional supplementary gear 133 and the second roller gear 134 in rotation.

Alternatively, the transmission assembly 130 may not include the optional supplementary gear 133. In this implementation, the transmission assembly 130 includes the motor gear 131, the first roller gear 132 and the second roller gear 134.

Alternatively, the transmission assembly 130 may include pulleys instead of gears. In this implementation, the transmission assembly 130 comprises a first roller pulley 132, an optional supplementary pulley 133 and a second roller pulley 134. Furthermore, the transmission assembly 130 may include chains instead of belts. It will be understood that the transmission assembly may include different gears and/or pulleys and different belts and/or chains.

Now referring to Figures 2A to 2C, another embodiment of a plant stem 30 separating apparatus for separating a stem from a larger upper portion of a plant

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will be described. The features are numbered with reference numerals in the 200 series which correspond to the reference numerals of the previous embodiment

The plant stem separating apparatus 200 comprises a cover 236 for protecting the transmission assembly 230. The cover 236 can be made from metal, plastic, polymer, combinations thereof, or any other suitable materials allowing protecting the transmission assembly 230. The cover may be embodied by a single piece of material or by a plurality of elements assembled altogether.

The plant stem separating apparatus 200 also comprises a roller assembly 240. 10 The roller assembly 240 includes a first roller 242 and a second roller 244. The first and second rollers 242, 244 are mounted into the support frame 210. In the illustrated embodiment, the first and second rollers 242, 244 are parallel one with respect to another. Each one of the first and second rollers 242, 244 are mounted on a rotatable shaft, such that the first and second rollers 242, 244 can rotate 15 around their respective rotation axis 243, 245. A conveying passage 241 is provided between the first and second rollers 242, 244, to allow passage of the stem between the first and second rollers 242, 244.

The first and second rollers 242, 244 are made from rubber or provide a rubber 20 interface surface with the stem. Alternatively, the first and second rollers 242, 244 can be made from polymer, plastic, or any other suitable material having the required mechanical properties. The resilient nature of the rubber rollers can accommodate varying stem diameters passing through a same passage.

In operation, the motor gear 231 rotates and engages the belt 235 along the closed loop path, to engage the first roller gear 232, the optional supplementary gear 233 and the second roller gear 234, which in turn engage the first and second rollers 242, 244 in rotation about their respective rotation axis 243, 245, in opposite direction with respect with one another.

The plant stem separating apparatus 200 also comprises a controller 250. The controller 250 is connected to the driving assembly 220 for controlling a rotational speed of the driving assembly 220. The controller 250 comprises an adjustable knob 252 for selecting a value of the rotational speed of the driving assembly 220 and an activation switch 254 for activating the driving assembly 220. It will be understood that the controller 250 is embodied by a plurality of electronic components assembled altogether to control the rotational speed of the driving assembly 220.

Alternatively, the controller 250 may comprise a plurality of indicators for indicating values of different parameters.

Alternatively, the plant stem separating apparatus 200 may comprise a driving assembly 220 having a first and a second electric motor. In this implementation, the first electric motor rotates one of the first and second rollers 242, 244, and the second electric motor rotates the other one of the first and second rollers 242, 244. For example and without being limitative, the first electric motor can rotate the first roller 242, while the second electric motor can rotate the second roller 244.

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In the illustrated embodiment of FIG. 3, the plant stem separating apparatus 200 comprises a front chute 201 for collecting the upper portion of the plant after separation of the upper portion of the plant from the stem of the plant.

The plant stem separating apparatus 200 further comprises shearing plate having a plurality of holes 260 of varying dimensions, defining inlets 262, 264 to receive and allow passage of the stem through the conveying passage 241 and block passage of the upper portion of the plant. Dimensions of the inlets 262, 264 are configured for allowing the passage of stem of different diameters, while blocking the larger upper portion of the plant.

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Alternatively, the plurality of holes 260 and the inlets 262, 264 can be beveled to help with the insertion of the stem into the plurality of holes 260 and facilitate the separation of the upper portion of the plant from the stem of the plant.

- Now referring to FIG. 4A to FIG. 4D, the use of the plant stem separating apparatus according to the embodiments described above for separating a stem from a larger upper portion of a plant, defining a stem separating process 400, will be described in more details.
- Briefly described, the process comprises the steps of engaging the stem of the plant, conveying the stem of the plant through the passage, separating the stem from the upper portion of the plant and ejecting the stem. More particularly, the first and second rollers rotate at a predetermined speed such that, when the stem is captured by the first and second rollers, the stem is conveyed through the passage between the first and second rollers with a pulling force that is sufficient to shear the upper portion of the plant stem upon the upper portion entering in contact with an inlet and being blocked.
 - In FIG. 4A, an engaging step 402 is shown. In the engaging step 402, a plant 470 including an upper portion 472 having an upper diameter 473 and a stem 474 having a stem diameter 475 is engaged into the inlet 462 having an inlet diameter 463. In the illustrated embodiment, the stem diameter 475 is substantially equal to the inlet diameter 463. The inlet 462 is configured and sized to receive and allow passage of the stem therethrough and block passage of the upper portion of the plant.
 - In FIG. 4B, a conveying step 404 is shown. In the conveying step 404, the stem of the plant 474 is conveyed through the passage 441. The first and second rollers 442, 444 rotate around their respective axis at the rotational speed set by the controller.

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In FIG. 4C, a separating step 406 is shown. In the separating step 406, the stem of the plant 474 is pulled by the first and second rollers 442, 444, resulting in the separation of the upper portion of the plant 472 from the stem of the plant 474. More particularly, the first and second rollers rotate at a predetermined rotational speed and, upon a capture of the stem between the first and second rollers, the stem is conveyed through the passage between the first and second rollers with a pulling force that is sufficient to shear the upper portion of the plant from the stem when upper portion enters in contact with the inlet and is blocked thereby.

In FIG. 4D, an ejecting step 408 is shown. In the ejecting step 408, the upper 10 portion of the plant 472 falls in the front portion of the plant stem separating apparatus and the stem of the plant 474 is ejected in the rear portion of the plant stem separating apparatus, through the ejection hole provided in the visually transparent plastic sheet.

The assembling of the plant stem separating apparatus according to the embodiments described above for separating a stem from a larger upper portion of a plant, defining an assembling process, will be described in more detail.

In a placing step, the plant stem separating apparatus is placed onto the support 20 base.

In an aligning step, the plurality of holes of varying dimensions are aligned with the holes provided in the support frame, such that the plurality of holes of varying dimensions is aligned with corresponding conveying passages.

In an attaching step, the front chute is mechanically attached to the support frame with affixing means with bolts, screws, or any other elements allowing the front chute to be joined to the support frame. The sidewall having the ejecting hole is attached to the support frame. In an optional substep, a rear deflector may be provided on the back portion of the plant stem separating apparatus, to catch the stripped plant.

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In a placing step, a front container is placed under the front chute, to catch the upper portion of the stripped plant. The placing step includes placing a rear container under the rear deflector, to catch the stripped stem.

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According to another embodiment of the present invention, there can also be provided a plant stem separating apparatus for separating a stem from a larger upper portion of a plant. The apparatus can include a shearing plate for shearing the upper portion of the plant from the stem, the shearing plate comprising at least one aperture, the aperture defining an inlet sized to receive and allow passage of the stem therethrough and block passage of the upper portion of the plant. The apparatus can also include a conveying system positioned behind the shearing plate for conveying any portion of the stem traversing the shearing plate further through said shearing plate. In the embodiment illustrated in the figures, a roller assembly is used. However, other conveying systems could be used. In all cases, the stem is conveyed by the conveying system with a pulling force that is sufficient to shear the upper portion of the plant from the stem upon said upper portion entering in contact with the inlet and being blocked thereby.

Several alternative embodiments and examples have been described and illustrated herein. The embodiments of the invention described above are intended to be exemplary only. A person skilled in the art would appreciate the features of the individual embodiments, and the possible combinations and variations of the components. A person skilled in the art would further appreciate that any of the embodiments could be provided in any combination with the other embodiments disclosed herein. It is understood that the invention may be embodied in other specific forms without departing from the central characteristics thereof. The present examples and embodiments, therefore, are to be considered in all respects as illustrative and not restrictive, and the invention is not to be limited to the details given herein. Accordingly, while specific embodiments have been illustrated and described, numerous

modifications come to mind without significantly departing from the scope of the invention as defined in the appended claims.

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CLAIMS

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1. A plant stem separating apparatus for separating a stem from a larger upper portion of a plant, the apparatus comprising:

5 a support frame;

a driving assembly affixed to the support frame;

a controller connected to the driving assembly for controlling a rotational speed of the driving assembly;

a shearing plate comprising a plurality of holes of varying dimensions, each one of the holes defining an inlet sized to receive and allow passage of the stem therethrough and block passage of the upper portion of the plant;

a roller assembly affixed to the support frame behind the shearing plate, the roller assembly comprising a first roller and a second roller, the first roller and the second roller rotating about their respective axis at the rotational speed controlled by the controller and defining a corresponding passage therebetween, the stem of the plant being conveyable through the corresponding passage; and

a transmission assembly transmitting rotational movement from the driving assembly to the roller assembly,

wherein, the first and second rollers rotate at a predetermined rotational speed such that, upon a capture of the stem between the first and second rollers, the stem is conveyed through the passage between the first and second rollers with a pulling force that is sufficient to shear the upper portion of the plant from the stem upon said upper portion entering in contact with the inlet and being blocked thereby.

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2. A plant stem separating apparatus for separating a stem from a larger upper portion of a plant, the apparatus comprising:

a shearing plate for shearing the upper portion of the plant from the stem, the shearing plate comprising at least one aperture, the aperture defining an inlet sized to receive and allow passage of the stem therethrough and block passage of the upper portion of the plant; and

a conveying system positioned behind the shearing plate for conveying any portion of the stem traversing the shearing plate further through said shearing plate,

wherein the stem is conveyed by the conveying system with a pulling force that is sufficient to shear the upper portion of the plant from the stem upon said upper portion entering in contact with the inlet and being blocked thereby.

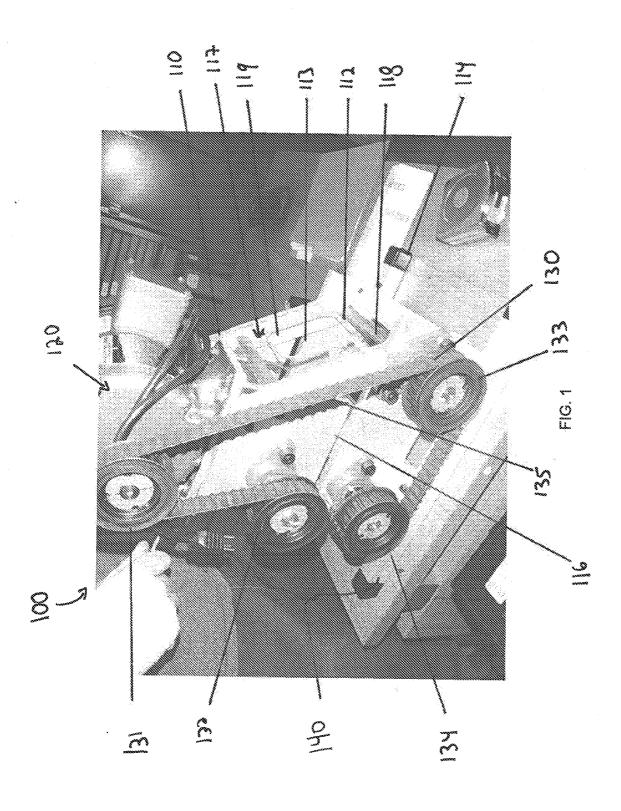
ABSTRACT

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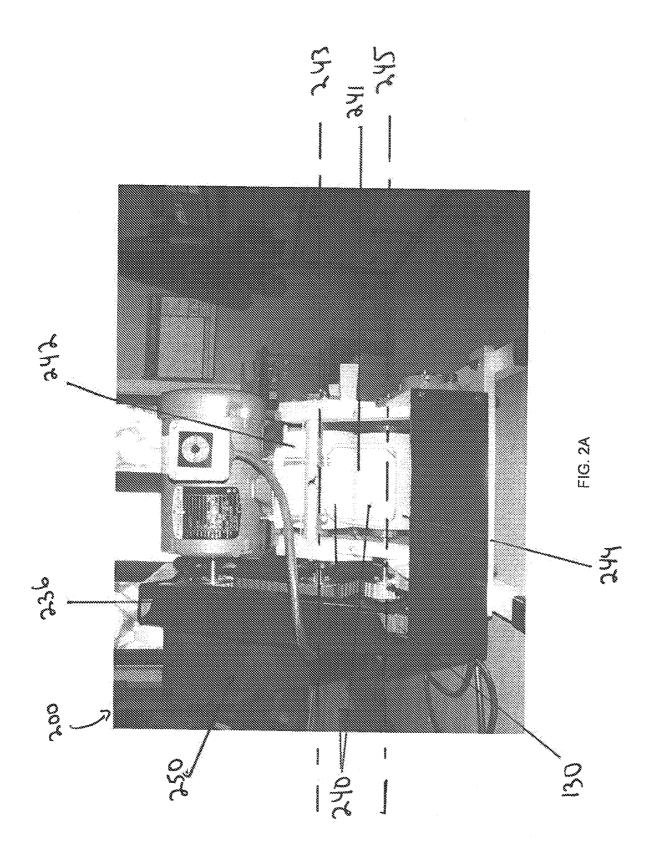
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The invention relates to a plant stem separating apparatus for separating a stem from a larger upper portion of a plant. The apparatus comprises a support frame, a driving assembly, a controller, a plurality of holes of varying dimensions, a roller assembly and a transmission assembly. The roller assembly comprises a first roller and a second roller. Upon a capture of the stem between the first and second rollers, the stem is conveyed through a passage between the first and second rollers with a pulling force that is sufficient to shear the upper portion of the plant from the stem.

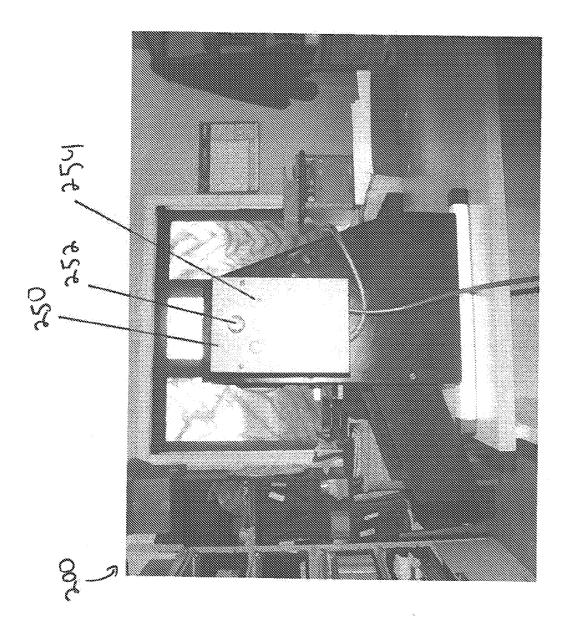
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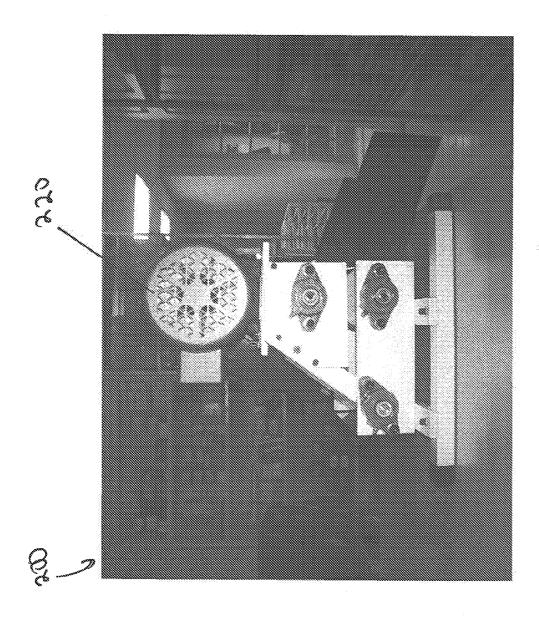
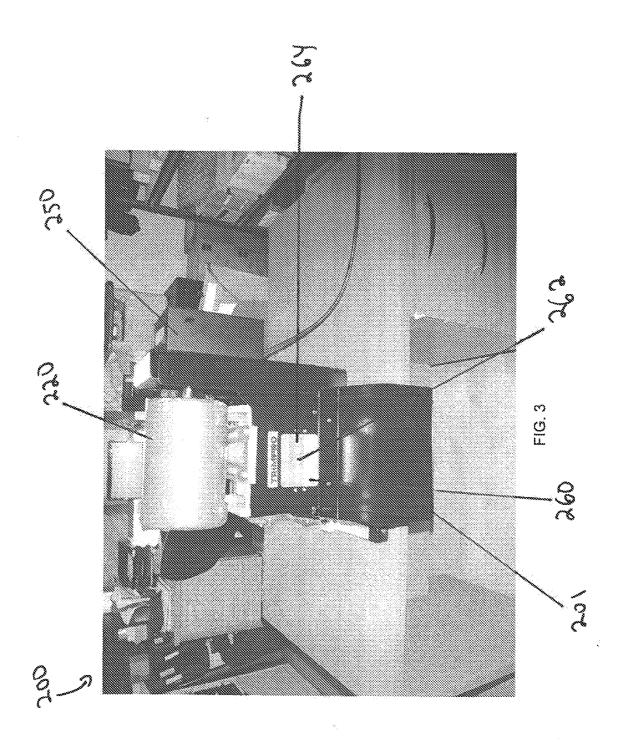
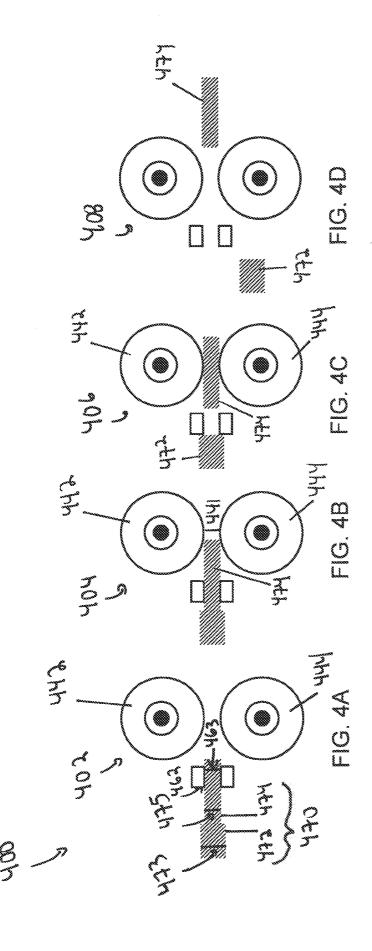


FIG. 20



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Electronic Acknowledgement Receipt		
EFS ID:	26426330	
Application Number:	62365438	
International Application Number:		
Confirmation Number:	7894	
Title of Invention:	PLANT STEM SEPARATING APPARATUS	
First Named Inventor/Applicant Name:	Carmen WARD	
Customer Number:	20559	
Filer:	Adam Mizera/Melanie Desaulniers	
Filer Authorized By:	Adam Mizera	
Attorney Docket Number:	014245-0005	
Receipt Date:	22-JUL-2016	
Filing Date:		
Time Stamp:	11:18:47	
Application Type:	Provisional	

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$130
RAM confirmation Number	13079
Deposit Account	181640
Authorized User	GRAVELLE, LOUIS-PIERRE

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			1822790	_	
1	Application Data Sheet	014245-0005ADS.pdf	7937b7cb1ba5bf89c2082373d56d04c8255 581a8	no	8
Warnings:					
Information:					
			63498		11
2	Specification	014245-0005Specification.pdf	5e7a17b2697491dff65f323719af9814db56 7c05	no	
Warnings:			-		
Information:					
			8523	no	
3	Claims	014245-0005 Claims.pdf	aa54380a8261ec74cabdb72bc283b8d843e 1267c		2
Warnings:					
Information:					
			4941	no	1
4	Abstract	014245-0005 Abstract.pdf	8bf21cf6859f539083b345f3014c16799002 d7d4		
Warnings:					
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			496591		6
5	Drawings-only black and white line drawings	014245-0005 Figures.pdf	ce5504553be66d5e06c1cd2459332ffacced e626	no	
Warnings:					
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	Fee Worksheet (SB06)	fee-info.pdf	29596	no	2
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

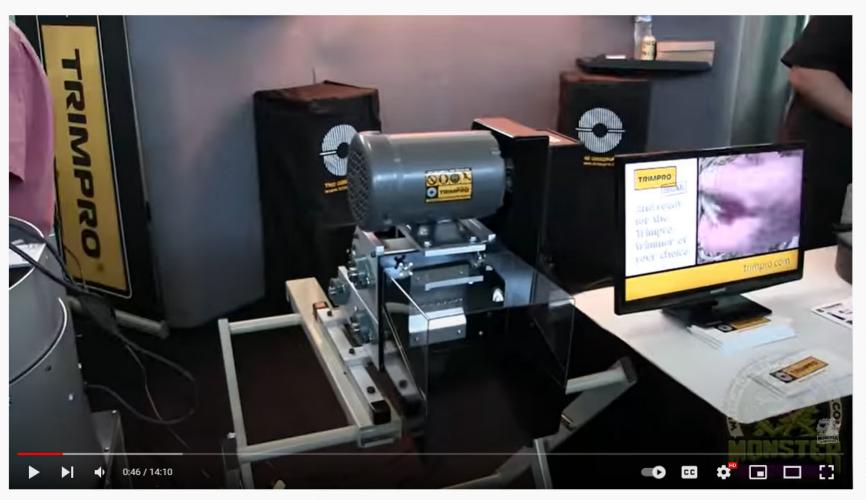
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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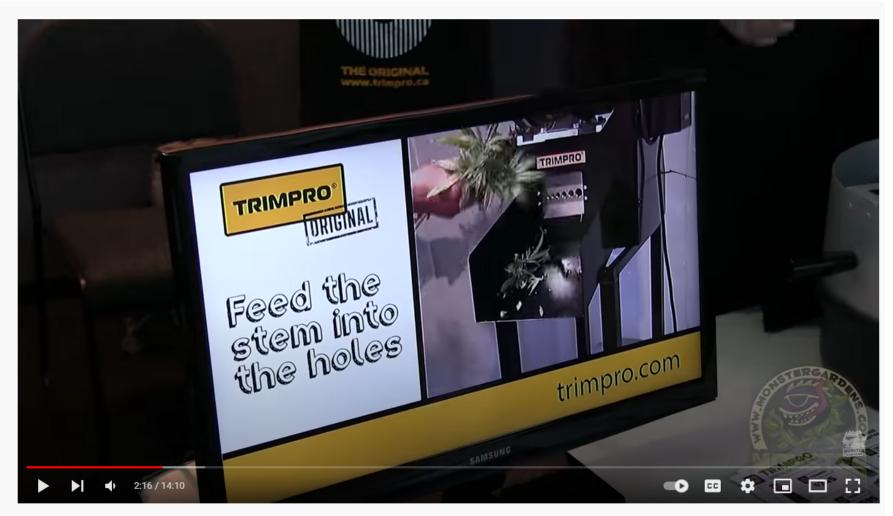
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Search

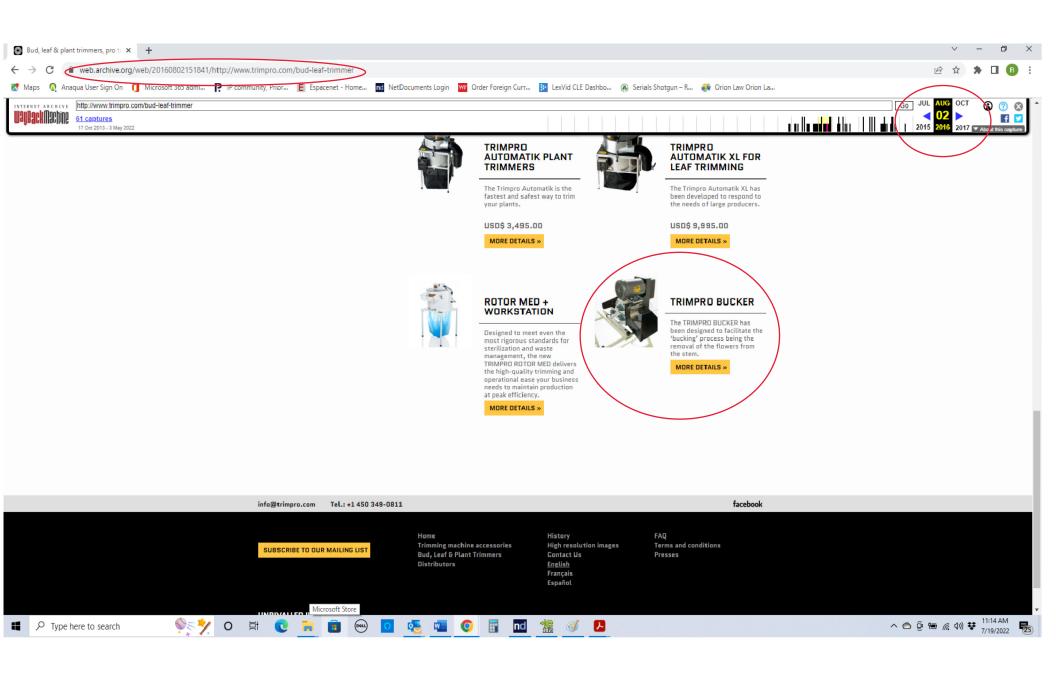
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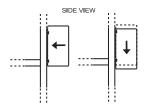
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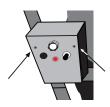


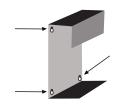
BUCKER INSTRUCTIONS

MACHINE ASSEMBLY

- Remove stand and erect as per instructions included in the box.
- Remove Bucker from box and place on top of the stand support bars ensuring the machine and stand are both facing forward.
- III. Remove the two (2) bolts supplied from the stand support bars.
- Align the holes in the bottom frame of the Bucker with the holes in the stand.
- Re-insert the two (2) bolts provided and tighten.
- Cut the plastic tie that is holding the Speed Control and remove from the inside of the machine
- VII. To fasted the Speed Control to the frame of the Bucker, remove the two (2) screws from the lid and gently pull it off. Mount the Speed Control on the four (4) screws on the side frame of the Bucker by aligning the holes, pushing the Controller downward then tightening the screws. Put the lid back in position and replace the screws.

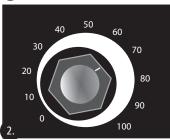




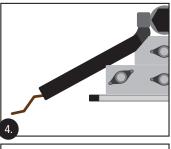


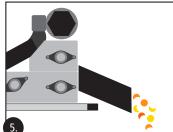
- VIII. Attach the front chute to the Bucker with the two (2) screws provided.
- IX. Attach the Plexiglas protector to the front of the Bucker with the two (2) wingnuts provided.
- Attach the rear deflector to the back of the Bucker with the three (3) screws provided.
- Place a container under the front chute to catch the flowers stripped off the branch.
- XII. Place a container under the rear deflector to catch the stripped branches of the plant.













- 1. Plug the Bucker into any normal household electrical outlet.
- 2. Control the speed of the Bucker by turning the dial located on the Speed Control. Optimal speed is between 60-80 as indicated on the speed control dial.
- 3. Standing to either side of the machine, insert the stem of a branch into one of the holes on the front of the Bucker until it is grabbed by the rubber rollers and pulled through.
- 4. The stripped branch is ejected out the back of the Bucker.
- 5. The trimmed flowers fall down the chute and into the placed container.

MAINTENANCE

There is no maintenance required on the Bucker other than an occasional cleaning, the frequency of which will depend on the strain of your plants.

For a quick cleaning

- A. Unplug the Bucker from the wall outlet along with any other exposed parts.
- B. The stainless steel front cutting plate is easily accessible and can be cleaned with Isopropyl Rubbing Alcohol on a cloth.

For a more complete cleaning

- C. Unplug the Bucker from the wall outlet.
- D. Remove the front Plexiglass protector.
- E. Remove the front chute.
- F. Take off the stainless steel plate by removing the four (4) screws.
- G. Remove the rear deflector.
- Clean the rollers and rest of the exposed machine with Isopropyl Rubbing Alcohol.
- Reassemble.
- NOTE THE BEARINGS USED ON THE BUCKER ARE SEALED AND NEVER REQUIRE GREASING.

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Patent Pending US Application #62/365.483

CA 3001150	Trimpro Bucker
1. A system for cannabis stem harvesting configured to specifically	The Trimpro Bucker was shown in San Francisco with a video showing
separate the leaves and buds from the stem comprising:	the bucker used to separate leaves and buds from cannabis stems. See Exhibit B.
a frame member;	The plant stem separating apparatus 100 includes a support frame. Page 4 line 16.
a die member coupled to the frame member, wherein the die member includes a plurality of orifices disposed within a plate;	The plant stem separating apparatus 200 further comprises shearing plate having a plurality of holes 260 of varying dimensions, defining inlets 262, 264 to receive and allow passage of the stem through the conveying passage 241 and block passage of the upper portion of the plant. Page 7, lines 25-28
a first rotating cylindrical member coupled to the frame member substantially adjacent to the die member including a first circumferential surface disposed between two ends;	The plant stem separating apparatus 200 also comprises a roller assembly 240. The roller assembly 240 includes a first roller 242 and a second roller 244. The first and second rollers 242, 244 are mounted into the support frame 210. In the illustrated embodiment, the first and second rollers 242, 244 are parallel one with respect to another. Each one of the first and second rollers 242, 244 are mounted on a rotatable shaft, such that the first and second rollers 242, 244 can rotate around their respective rotation axis 243, 245. Page 6 lines 10-16
a second rotating member coupled to the frame member substantially adjacent to the die member including a second circumferential surface disposed between two ends;	See directly above
wherein the two rotating members are oriented and supported by the frame member in a substantially vertical configuration defining a pinch region therebetween as a region across which the first and	the first and second rollers 242, 244 are parallel one with respect to another. Page 6 lines 13-14.

second circumferential surfaces are in the closest proximity to one another;	
a rotation system including a motor and power source coupled to the frame member and at least one of the first and second rotating members; and	Alternatively, the plant stem separating apparatus 200 may comprise a driving assembly 220 having a first and a second electric motor. In this implementation, the first electric motor rotates one of the first and second rollers 242, 244, and the second electric motor rotates the other one of the first and second rollers 242, 244. For example and without being !imitative, the first electric motor can rotate the first roller 242, while the second electric motor can rotate the second roller 244. Page 7 lines 13-18
wherein the coupling between the die member and the frame member includes disposing the plurality of orifices within six inches of the pinch region.	Per the Triminator representatives viewing the Trimpro Bucker at the San Francisco Grow Pro Expo, the distance is believed to be 4 inches or less.
2. The system of claim 1, wherein the coupling between the die member and the frame member includes disposing the plurality of orifices within four inches of the pinch region; or	Per the Triminator representatives viewing the Trimpro Bucker at the San Francisco Grow Pro Expo, the distance is believed to be 4 inches or less.
optionally wherein the coupling between the die member and the frame member includes orienting the plate at an angle.	The Timpro plate is shown at an angle relative to the frame. See Fig. 1
3. The system of claim 1, wherein the first and second cylindrical members are configured to rotate about a first and second axle, and wherein the ends of the first and second cylindrical members include an end diameter between three and twelve inches (0.0762 "0.3048 meters);	Each one of the first and second rollers 242, 244 are mounted on a rotatable shaft, such that the first and second rollers 242, 244 can rotate around their respective rotation axis 243, 245. Page 6 lines 14-16.

	Per the Triminator representatives viewing the Trimpro Bucker at the San Francisco Grow Pro Expo, the diameter of the rollers is believed to be between three and twelve inches.
and optionally wherein at least one of the first and second axles is coupled to the motor of the rotation system.	Alternatively, the plant stem separating apparatus 200 may comprise a driving assembly 220 having a first and a second electric motor. In this implementation, the first electric motor rotates one of the first and second rollers 242, 244, and the second electric motor rotates the other one of the first and second rollers 242, 244.
	Page 7 lines 13-18
4. The system of claim 1, wherein the plurality of orifices both circular and non-circular openings under two inches (0.0508 meters) in diameter.	Based on the Grow Pro Expo video, the holes are believed to be less than two inches in diameter. None of Eteros' products utilize circular and non-circular openings.
5. The system of claim 1, wherein the rotation system is variable and configured to rotate at least one of the first and second rotating members at a selectable rotation speed between ten and two hundred and fifty linear feet per minute (0.0508 to 1.277 meters per second), wherein the unit linear feet per minute corresponds to at least one of the first and second circumferential surface with respect to the plurality of orifices.	The plant stem separating apparatus 200 also comprises a controller 250. The controller 250 is connected to the driving assembly 220 for controlling a rotational speed of the driving assembly 220. The controller 250 comprises an adjustable knob 252 for selecting a value of the rotational speed of the driving assembly 220 and an activation switch 254 for activating the driving assembly 220. Page 7, lines 1-5 Due to the breadth of the claimed range, it is believed the Trimpro
	Bucker meets this limitation.
6. The system of claim 5 wherein the rotation system includes a user adjustment member disposed on the plate and configured to selectively control the selectable rotation speed.	The plant stem separating apparatus 200 also comprises a controller 250. The controller 250 is connected to the driving assembly 220 for controlling a rotational speed of the driving assembly 220. The controller 250 comprises an adjustable knob 252 for selecting a value

	of the rotational speed of the driving assembly 220 and an activation switch 254 for activating the driving assembly 220. Page 7, lines 1-5, see also Figures
7. The system of claim 1, wherein the rotation system is configured to rotate at least one of the first and second rotating members as a drive rotator, and wherein the first and second rotating members are coupled at the pinch region thereby causing an automatic dependent rotation of the non-drive rotator as a follow rotator.	Alternatively, the transmission assembly 130 may include pulleys instead of gears. In this implementation, the transmission assembly 130 comprises a first roller pulley 132, an optional supplementary pulley 133 and a second roller pulley 134. Furthermore, the transmission assembly 130 may include chains instead of belts. It will be understood that the transmission assembly may include different gears and/or pulleys and different belts and/or chains. Page 5, lines 23-28
8. The system of claim 7, wherein the coupling between the first and second circumferential regions includes an accommodating pressure system including at least one of a durometer of the first and second rotating member, a first and second gripping surface on the first and second circumferential surfaces respectively, and a tension member coupling between the first and second rotating member and the frame member.	The first and second rollers 242, 244 are made from rubber or provide a rubber interface surface with the stem. Alternatively, the first and second rollers 242, 244 can be made from polymer, plastic, or any other suitable material having the required mechanical properties. The resilient nature of the rubber rollers can accommodate varying stem diameters passing through a same passage. Page 6, lines 20-24 – the rubber interface surface inherently has a
9. The system of claim 6, wherein the variable rotation system includes a user adjustment member disposed on the plate and configured to selectively control the selectable rotation speed.	The plant stem separating apparatus 200 also comprises a controller 250. The controller 250 is connected to the driving assembly 220 for controlling a rotational speed of the driving assembly 220. The controller 250 comprises an adjustable knob 252 for selecting a value of the rotational speed of the driving assembly 220 and an activation switch 254 for activating the driving assembly 220.
	Page 7, lines 1-5, see also Figures

10. The system of claim 5, wherein the coupling between the die member and the frame member includes orienting the plate at an angle.	The Timpro plate is shown at an angle relative to the frame. See Fig. 1
11. The system of claim 5, wherein the first and second cylindrical members are configured to rotate about a first and second axle, and therein the ends of the first and second cylindrical members include an end diameter between three and twelve inches (0.0762 "0.3048 meters).	Each one of the first and second rollers 242, 244 are mounted on a rotatable shaft, such that the first and second rollers 242, 244 can rotate around their respective rotation axis 243, 245. Page 6 lines 14-16.
	Per the Triminator representatives viewing the Trimpro Bucker at the San Francisco Grow Pro Expo, the diameter of the rollers is believed to be between three and twelve inches.
12. The system of claim 10, wherein at least one of the first and second axles is coupled to the motor of the rotation system.	Alternatively, the plant stem separating apparatus 200 may comprise a driving assembly 220 having a first and a second electric motor. In this implementation, the first electric motor rotates one of the first and second rollers 242, 244, and the second electric motor rotates the other one of the first and second rollers 242, 244. For example and without being !imitative, the first electric motor can rotate the first roller 242, while the second electric motor can rotate the second roller 244.
	Page 7 lines 13-18
13. The system of claim 5, wherein the plurality of orifices include both circular and non-circular openings under two inches (0.0508 meters) in diameter.	Based on the Grow Pro Expo video, the holes are believed to be less than two inches in diameter.
	None of Eteros' products utilize circular and non-circular openings

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14. The system of claim 5, wherein rotation system is configured to rotate only one of the

first and second rotating members as a drive rotator, and wherein the first and second rotating

members are coupled at the pinch region thereby causing an automatic dependent rotation of the non-drive rotator as a follow rotator; and optionally wherein the coupling between the first and second circumferential regions includes an accommodating pressure system including at least one of a durometer of the first and second rotating member, a first and second gripping surface on the first and second circumferential surfaces respectively, and a tension member coupling between the first and second rotating member and the frame member.

Alternatively, the transmission assembly 130 may include pulleys instead of gears. In this implementation, the transmission assembly 130 comprises a first roller pulley 132, an optional supplementary pulley 133 and a second roller pulley 134. Furthermore, the transmission assembly 130 may include chains instead of belts. It will be understood that the transmission assembly may include different gears and/or pulleys and different belts and/or chains.

Page 5, lines 23-28

The first and second rollers 242, 244 are made from rubber or provide a rubber interface surface with the stem. Alternatively, the first and second rollers 242, 244 can be made from polymer, plastic, or any other suitable material having the required mechanical properties. The resilient nature of the rubber rollers can accommodate varying stem diameters passing through a same passage.

Page 6, lines 20-24 – the rubber interface surface inherently has a durometer hardness.

15. The system of claim 5, wherein the plurality of orifices include both circular and non-

circular openings under two inches (0.0508 meters) in diameter, and wherein the rotation system is configured to rotate only one of the first and second rotating members as a drive rotating member, and wherein the first and second rotating members are coupled at the pinch region thereby causing an automatic dependent rotation of the non-drive rotating member as a follow rotating member.

Based on the Grow Pro Expo video, the holes are believed to be less than two inches in diameter.

None of Eteros' products utilize circular and non-circular openings

Alternatively, the transmission assembly 130 may include pulleys instead of gears. In this implementation, the transmission assembly 130 comprises a first roller pulley 132, an optional supplementary pulley 133 and a second roller pulley 134. Furthermore, the transmission assembly 130 may include chains instead of belts. It will be understood that the transmission assembly may include different gears and/or pulleys and different belts and/or chains.

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